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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,802	07/09/2003	Akira Yamamoto	500.36547CC3	8059

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MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.
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EXAMINER

PORTKA, GARY J

ART UNIT PAPER NUMBER

2188

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,802

Applicant(s)

YAMAMOTO ET AL.

Examiner

Gary J. Portka

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/9/2003; 4/26 and 6/30/2004; and 8/10/2005
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49-51 is/are allowed.
- 6) ☒ Claim(s) 31-33 and 40-42 is/are rejected.
- 7) ☒ Claim(s) 34-39 and 43-48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/149,666.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 7/9/03, 6/30/04, 8/10/05

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-30 were canceled, and claims 31-51 were added by Applicant's preliminary amendments. Claims 31-51 are pending.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/149,666, filed on September 9, 1998. ***Information Disclosure Statement***

3. The information disclosure statements (IDS) submitted on July 9, 2003, June 30, 2004, and August 10, 2005 were considered by the examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 31-33 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kern et al., US 5,870,537, in view of Yanai et al., US 5,544,347.

6. As to claims 31-32 and 40-41, Kern discloses a system for storing data (Abstract, Figs. 1-2) comprising first storage system having disk units and controller (3, 4, 205, and 206) coupled to a processing unit (1, 201), second storage system coupled to the first with disk units and controller (6, 7, 215-217) wherein the first controller receives write data from the processing units, stores the data in a first disk units, and transmits the data and reference information to the second controller (see col. 7 lines 54-57, and

col. 8 lines 38-55, which describes how applications running on the host use a single time reference to cause each write request to have a unique time stamp), the second controller stores the write data in cache (see col. 7 lines 54-57, and col. 11 lines 25-36, where data may be read from cache before it is stored to disk) and selects write data to be stored in a second disk from the data being stored in cache according to the reference information (see col. 11 lines 25-36, considering the claimed cache to be cache 420 and NVS 422, also col. 9 lines 14-60, noting that the storage controllers described as shown in Figs. 3 and 4 apply to both the primary and secondary controllers, and wherein the control information includes the recited reference information).

7. Kern teaches that the first processor, via PDM 204, transmits write data and reference information to the second controller (see col. 9 lines 14-60), but does not teach as recited that the first controller does this transmission. However, Yanai teaches an analogous remotely backed-up system in which a second storage system provides back-up for a first storage system. These storage systems include controllers that communicate directly with one another to coordinate the back-up (see Abstract). As taught at col. 2 lines 25-55, the maintaining of a copy between two storage systems without requiring intervention from a host avoids degrading the performance of the host. An artisan would have desired this advantage in the system of Kern, and thus would have been motivated to use the first controller of Kern to transmit the required data (write data and control information) to the second controller, to avoid using host processing power as taught by Yanai. Thus it would have been obvious to one of

ordinary skill in the art at the time of the invention to transmit write data and reference information with the first controller, because this was known to avoid using the host for this processing and thus prevent degrading its performance.

8. As to claims 33 and 42, the system of Kern insures data writing order using control data sent from the primary to the secondary site. Although it might seem intuitive that such an arrangement provides the capability to scrap data (the control data indicates some sort of error where data cannot be written in order, and thus must be requested again), Kern does not appear to explicitly disclose this. Yanai describes an analogous system in which primary and secondary stores track each others status (see col. 8 lines 6-42), and thus clearly provides the ability to scrap data according to control information. This provides the desirable benefit of assisting in error recovery across the system. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to scrap data according to received reference information, because this was known as an ability of an error recovery system.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 31-33 and 40-42 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No.

6,615,332. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of 6,615,332 recite the same basic material with some narrower limitations (destageable time instead of reference information), and it would have been obvious to leave out details of 6,615,332's claims since their functions are not required.

11. Claims 31-33 and 40-42 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of copending Application No. 10/831,138. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 14-16 of 10/831,138 are substantially the same as these claims of the present application; further claims 1-15 of 10/831,138 recite the same basic material with some narrower limitations (destageable time instead of reference information), and it would have been obvious to leave out details of 10/831,138's claims since their functions are not required.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

12. Claims 49-51 are allowed.
13. Claims 34-39 and 43-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 21, 2005

Gary J Portka
Primary Examiner
Art Unit 2188


GARY PORTKA
PRIMARY EXAMINER